Montana Laboratory Sentinel

Updates from the MT Laboratory Services Bureau
800-821-7284 www.lab.hhs.mt.gov
3/7/2011

Certificate Errors on Harvest Webstation:

If you get a certificate warning when you visit the Webstation site (https://harvest.hhs.mt.gov:444/) you can eliminate it by installing the DPHHS root certificate. Go to the following link to find out how: https://dphhs.mt.gov/cert/. FYI, the Webstation site is secure, and you may continue without installing the certificate (ignore the "not recommended" warning.)

Alcohol-Based Hand Sanitizers Associated With Norovirus Outbreaks Ron Zimmerman

February 23, 2011 (San Antonio, Texas) — Use of alcohol-based hand sanitizer (ABHS) in place of soap and water in nursing homes represents one of the greatest institutional risk factors for the spread of noroviruses and can lead to outbreaks of acute gastroenteritis, according to a study presented here at Preventive Medicine 2011: Annual Meeting of the American College of Preventive Medicine. The findings suggest that significant changes should be made either by substituting soap for these products or by training staff members in ways to use them more effectively.

The study, conducted by David Blaney, MD, PhD, from the Centers for Disease Control and Prevention in Atlanta, Georgia, attempted to identify risk factors for widespread norovirus outbreaks in long-term care facilities (LTCFs) in New England.

Noroviruses are single-stranded RNA viruses and are highly infectious, requiring as few as 10 viral particles to infect, Dr. Blaney pointed out. They are stable in the environment and are spread by the fecal-oral route. Virus outbreaks are common in LTCFs, perhaps because of the specific characteristics of those facilities, such as close living quarters, shared toilet facilities, incontinence among residents, and poor hygiene resulting from dementia or physical disabilities, he added.

Dr. Blaney pointed out that norovirus exhibits resistance to alcohol-based hand sanitizers, according to a study published in 2010. His study confirms that in LTCFs, the preferential use of an ABHS alone may not effective in preventing the spread of these viruses and may in fact increase the risk for outbreaks.

To read the complete article, visit:
http://www.medscape.com/viewarticle/737884?sssdmh=dm1.668407&src=nldne

CDC Website Provides Raw Milk Information

Many people believe that foods with minimal or no processing like organic and locally-grown foods are better for their health. But when people choose to drink raw milk, that is milk that has not been pasteurized, the impact on one's health can be quite severe. Mary McGonigle-Martin discovered the dangers of raw milk when her young son ended up in a California hospital for several weeks as doctors fought to save his life. http://www.cdc.gov/foodsafety/rawmilk/raw-milk-index.html

Oregon *Yersinia pestis* (bubonic plague/with sepsis)

The only culture-confirmed case of *Yersinia pestis* in the U.S. in 2010 was isolated in Oregon. Oregon State Public Health Laboratory personnel were gracious enough to let us share their lessons learned so that microbiologists in Montana could be reminded of some key elements of biosafety.

Five different clinical laboratories in two states were involved in the identification. Blood cultures collected from the infected patient yielded positive results by the following day. Gram staining directly from the blood culture bottles revealed "large" gram negative bacilli (GNB) with bipolar staining. The cultures were subbed to Blood agar and EMB the same day and when growth appeared 48 hours later, the original bottles and subcultures were referred to reference laboratories for identification.

Three different laboratories using three different commercial automated systems yielded different results: *Pseudomonas luteola, Acinetobacter lwoffii,* and *Y. pseudotuberculosis*. Remember that automated microbiology systems should not be used to identify select agents due to the potential for aerosols if the system is not closed, organism growth may be too slow, or organisms are not included in system databases. *Y. pestis* is a large *E. coli*-like GNB on Gram stain that may initially grow slowly. It is a relatively inert organism that grows best at room temperature. Aerosol generation could be a potential risk for respiratory involvement or pneumonic plague that could be spread from person to person.

Out of seven microbiologists who worked on identifying this organism, one commercial reference lab microbiologist did not realize the referred isolate was from a blood culture and did not perform testing inside the biosafety cabinet (BSC). Because of possible exposure from potential aerosols, the microbiologist was treated prophylactically with Ciprofloxacin. Microbiologists at another commercial referral laboratory automatically work-up blood cultures in the BSC, but performed anti-microbial susceptibility testing at the bench. At this point, the organism was several days old.

Five microbiologists were interviewed. Plague was the farthest thing from the mind of one microbiologist. Also mentioned was not wanting to "bother" the Oregon State Public Health Laboratory with the GNB in blood culture, thinking it might have been something as simple as a young *E. coli* on original blood culture gram stain.

A "notes from the field" article was published Friday, February 25th, in MMWR. The article can be viewed at:
http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6007a4.htm?s_cid=mm6007a4_e&source=govdelivery.

Biosafety reminders to clinical laboratory scientists performing microbiological testing:

- All slow-growing gram negative bacilli, especially from a sterile source, should be worked up using the biological safety cabinet.
- Bacteria that are suspected to be select agents should not be identified using automated systems.
- Alert referral labs if you are sending a confirmation for a potential select agent. Because of the rural nature of Montana, select agents occur naturally, and should always be considered when identifying a slow-growing gram negative bacillus.